

-20-

WHAT IS CLAIMED IS:

1 1. A troughing idler installation comprising
2 side supports located opposite each other with respect
3 to a space along which a conveyor belt moves along a belt
4 path;

5 a horizontal shaft extending across the space between
6 the side supports transversely to the belt path and having a
7 medial roller affixed thereon;

8 antifriction bearings mounted on the side supports and
9 supporting the horizontal shaft for rotation about a shaft
10 axis; and

11 ^{for}
12 1/24/49
13 a side roller unit supported exclusively by ~~each~~ ^{one} side
14 support member, each side roller unit having

15 a side roller carrier that includes a spindle, a
16 hub, and inboard and outboard antifriction bearings
17 interposed between the spindle and the hub, and

18 a side roller supported in cantilevered relation
19 with respect to the side support member by the side
20 roller carrier about a spindle axis;

21 the medial roller and the side rollers being arranged
22 relative to each other so as to support the belt with side
 portions of the belt sloping upwardly and outwardly with
 respect to a medial portion of the belt.

21

-21-

- ~~2.~~ A troughing idler installation according to claim 1 wherein the spindle is affixed to the side support and the side roller is affixed to the hub.

~~16~~ ~~3.~~ A troughing idler installation according to claim ~~2~~ wherein the spindle has an inner threaded end that is received within the hub and receives a retainer nut for the inboard antifriction bearing.

~~11~~ ~~4.~~ A troughing idler installation according to claim ~~3~~ wherein the hub has an inboard end located inboard of the retainer nut with respect to the inboard antifriction bearing and receiving a hub cap for retaining a lubricant within the hub.

~~12~~ ~~5.~~ A troughing idler installation according to claim ~~3~~ wherein the hub has an outboard end located outwardly of the outboard bearing, and the side roller unit further includes a grease seal between the outboard end of the hub and the spindle to retain a lubricant within the hub.

~~15~~ ~~6.~~ A troughing idler installation according to claim ~~3~~ wherein the inboard and outboard antifriction bearings are

-22-

3 closely spaced apart and proximate to the side support
4 member.

1 16 7. A troughing idler installation according to claim 6 15
2 wherein the side roller has a circular cylindrical shell and
3 a dust cap is affixed in the inboard end of the shell.

1 17 8. A troughing idler installation according to claim 7 16
2 wherein the support member is a side wall of a trunking of
3 an enclosed belt conveyor, and the spindle is affixed to a
4 mounting bracket received in an opening in the trunking side
5 wall.

1 18 9. A troughing idler installation according to claim 8 17
2 wherein the mounting bracket includes a sleeve surrounding
3 an outboard end portion of the shell and the side roller
4 unit includes a dust seal interposed between the sleeve and
5 the shell.

1 13 10. A troughing idler installation according to claim 5 12
2 wherein the spindle and the hub are elongated and are
3 coextensive with a major portion of the side roller, and the
4 inboard and outboard antifriction bearings are widely spaced
5 apart on the spindle.

13

-23-

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14 11. A troughing idler installation according to claim 10
wherein the side roller has a tubular shell, the shell is
spaced apart radially from the hub, and spaced apart annular
discs join the shell to the hub.

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2 12. A troughing idler installation according to claim 1
wherein the hub is affixed to the side support member and
the spindle is affixed to the side roller.

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3 13. A troughing idler installation according to claim 12
wherein the hub is affixed to the outboard side of the the
support member.

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4 14. A troughing idler installation according to claim 13
wherein the spindle has a threaded outboard end and a
retainer nut is threaded onto the outboard end and retains
the outboard antifriction bearing on the spindle and
prevents the spindle from sliding axially downwardly through
the bearings.

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5 15. A troughing idler installation according to claim 14
wherein the ~~hub has an~~ ^{of the hub is} outboard end located outwardly of the
outboard bearing and the side roller unit further includes a

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-24-

hub cap on the outboard end of the hub to retain a lubricant within the hub.

1 ¹⁶ A troughing idler installation according to claim ¹⁵ ₁₅
2 wherein the side roller unit includes a grease seal between
3 the hub and the spindle inboard of the inboard antifriction
4 bearing.

1 ¹⁷ A troughing idler installation according to claim ¹⁶ ₁₆
2 wherein the side roller has a tubular shell and a dust cap
3 is affixed in the inboard end of the shell.

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18. A troughing idler installation according to claim ¹⁶ ₁₆
wherein the support member is a side wall of a trunking of
~~an enclosed belt conveyor~~ and said belt conveyor is
enclosed in said trunking

20